



### **Dusters**

Techspray dusters blow away dust, microscopic contaminants, lint, metallic oxide deposits and other soils that can cause heat build-up or shorts in sensitive electronics. They are completely portable, ultra-pure, and free of moisture, oil, and other contaminants.

- Moisture free
- Non-ozone depleting
- Zero residue
- VOC exempt
- Safe on plastics

#### **Nonflammable Duster**

Nonflammable, 100% HFC-134a duster

**1671-10S** 10 oz. (283g) aerosol **1671-15S** 15 oz. (425g) aerosol

**CAN1671-10S** 10 oz. (283g) aerosol

Canada compliant packaging

**CAN1671-15S** 15 oz. (425g) aerosol

Canada compliant packaging







- Safest choice for energized equipment
- Velocity 11.3 M/s



- Most powerful blast
- Nonflammable
- Safest choice for energized equipment

High velocity, 100% HFC-134a duster

- Vortex 360° sprays upside-down
- Velocity -14.6 m/s

**1697-85** Vortex 360° 8 oz. (227g) aerosol

**1697-10S** 10 oz. (283g) aerosol



1697-85



1697-105

### **Economy Duster**

#### Economical HFC-152a duster

- Best value 30% more volume
- Lower global warming potential 10% of HFC-134a
- Velocity 11.4 m/s

**1673-105** 10 oz. (283g) aerosol

Note: not for use on powered electrical equipment, on hot surfaces, and around open flames or sparks.



1673-10S



#### **Renew-Duster**

**1580-10S** 10 oz. (283g) aerosol



- GWP less than 1/100th of HFC-134a
- Nonflammable
- Non-ozone depleting
- Velocity 12 m/s

DUSTER SELECTION C	GUIDE					
	Spray Power	Nonflammable	360° Spray	Contents	GWP*	Use On Live Circuits
1697-10S Vortex Duster	Best	Yes	No	HFC-134a	1300	Yes
1697-8S Vortex 360° Duster	Best	Yes	Yes	HFC-134a	1300	Yes
1671 Duster	Good	Yes	No	HFC-134a	1300	Yes
1673 Economy Duster	Good	No	No	HFC-152a	140	No
1580 Renew-Duster	Good	Yes	No	HFO-1234ze	6	Yes

<sup>\*</sup> Global warming potential (GWP) is calculated based on a 100 year time horizon. Carbon dioxide has a GWP of 1.

# **Isopropyl Alcohol (IPA)**

Techspray has the broadest line of isopropyl alcohol (IPA) in the industry, ranging from aerosol, pre-saturated wipes, and bulk packaging. Two grades of IPA are available: 99.8% anhydrous (containing as little water as possible) for fast-drying cleaning and 70% IPA / 30% DI for stencil and other cleaning when slower evaporation is desired.

### 70% Bulk - Cleaning Grade IPA

**1608-G4** 1 gal. (3.8L) container

#### 99.8% Bulk - Technical Grade IPA

1610-P 1 pt. (473mL) bottle 1610-PT 1 pt. (473mL) bottle

w/trigger sprayer

1610-G1 1 gal. (3.8L) bottle

1610-G4 1 gal. (3.8L) bottle sold only 4/cs

**1610-5G** 5 gal. (19L) container **1610-54G** 54 gal. (205L) drum

Specs: 99.8% IPA qualified as ACS reagent grade, fed spec TT-1-735A (amend 3, notice 2) grades A&B, ASTM D770-05





Spring-loaded lid

automatically

closes



TEGHSPRAY

1610-P



- 5"x8" (127mm x 203mm) wipes
- 100 wipes/tub
- · Lint-free , tear resistant polyester

#### 70% IPA Wipes

1608-100DSP 100 wipes in Disposable Tub 1608-100FL 100 wipes in Flip-Top Tub 1608-100R 100 wipes refill roll

#### 99.8% IPA Wipes

1610-100DSP 100 wipes in Disposable Tub 1610-100FL 100 wipes in Flip-Top Tub 1610-100R 100 wipes refill roll







### **Individually Wrapped** Wipes

- 99.8% pure IPA
- 5.5"x5.5" (140mm x 140mm) wipes
- 50 wipes/box
- Lint-free , tear resistant poly-cellulose

#### 1610-50PK



#### **E-Line IPA Electronics Cleaner**

#### 99.8% IPA in convenient aerosol package

- 99.8% pure IPA
- Compliant with SCAOMD rule 1171
- Plastic safe
- · Low toxicity
- Non-ozone depleting

1610-12S 12 oz. (340g) aerosol

Specifications for 99.8% IPA: Fed spec TT-1-735A (amend 3, notice 2) grades A&B, ASTM D770-05



# Precision, Safety, Performance . . . Advanced Chemistries to Improve Your Products & Processes.

Techspray® offers cutting-edge technologies to improve your processes. Several formulas are available for applications ranging from electronics cleaning to heavy-duty industrial cleaning.



#### **POWERFUL, NONFLAMMABLE** & COST EFFECTIVE CLEANER

- Ideal replacement for n-propyl bromide (nPB) and other toxic industrial solvents
- · Available in aerosol or bulk for vapor degreasing, ultrasonic and soak applications
- PWR-4™ Maintenance Cleaner for heavy-duty degreasing and contact cleaning, PWR-4™ Flux Remover for PCB cleaning



#### **NONFLAMMABLE & POWERFUL CLEANER**

- Top-selling solvent that's effective on the broadest array of soils
- Available in aerosol or bulk for ultrasonic and soak applications



#### **NONFLAMMABLE, POWERFUL** & HIGH PRECISION CLEANER



- Replacement for AK225, which was banned because of environmental issues
- Ideal for aviation, aerospace, medical and military applications
- Available in aerosol or bulk for vapor degreasing, ultrasonic and soak applications



#### **ECONOMICAL & POWERFUL CLEANER, BUT FLAMMABLE**

- Effective cleaner, yet safe on sensitive plastics
- · Available in aerosol or bulk for ultrasonic and soak applications



#### HIGH PERFORMANCE ECO-FRIENDLY CLEANERS

- Water-based flux removers with zero GWP and low VOC
- Engineered for batch and inline equipment







#### SAFER REPLACEMENTS FOR TOXIC INDUSTRIAL SOLVENTS

n-Propyl Bromide (nPB), Trichloroethylene (TCE), and Perchloroethylene (Perc) are three examples of harmful chemicals that are commonly used in aerosol cleaners in industrial applications. These chemicals are commonly used as cleaning solvents because they are nonflammable, have high solvency, and are relatively inexpensive.

Because of safety concerns, these solvents are under close scrutiny by OSHA, EPA, and local agencies. For example, The American Conference of Governmental Industrial Hygienists (ACGIH) recommends a 10 ppm time-weighted average threshold limit of nPB, but has proposed a lower 0.1 ppm (ACGIH 2013). That's because nPB is a suspected human carcinogen, and has shown to negatively impact neurological and reproductive functioning.

Techspray offers effective replacements for these toxic solvents. PWR-4® High Performance Solvents provides all the cleaning power of nPB and other industrial solvents, but without the health risks.

For more information, read "Toxic Chemicals Used for Industrial Cleaning" white paper at www.techspray.com





# **Degreasers / Contact Cleaners**



#### **Maintenance Cleaner**

Blasts away oil and contaminants off of contacts, printed circuit boards, barcode instruments, switch boxes, gear boxes, and electronic motor controllers. Grease and oil flow right off, reducing the time and materials needed to scrub off stubborn soils.

- Nonflammable
- Much safer than most common industrial solvents TCE, nPB, Perc & Methylene Chloride
- Powerful cleaner Ideal for degreasing and contact cleaning
- Available in aerosol or bulk for vapor degreasing, ultrasonic and immersion cleaning
- Rapid evaporation
- Non-ozone depleting
- Cleaning applications: electronics, relays, switches & breakers, transformers, and electric motors and generators

**3400-20S**20 oz. (567g) aerosol**3400-G**1 gal. (3.8L) pail**3400-5G**5 gal. (18.9L) pail**3400-54G**54 gal. (204L) drum



### **MAINTENANCE CLEANER SELECTION GUIDE**

Maintenance cleaners clean oil and contaminants off of metal parts, print circuit boards, barcode instruments, switch boxes, gear boxes, and engine	red	1630 CS Maintens	16325 Maintenance Clear	1635 Mat Chan	1638 Material Co.	1651 p. Universal Solu-	1652p. 100.00 10	2857 32 Marien / Place	16221 MRAMINE	1670 FOLL WHILING OF THE	100 E. LIME 1911 "STESSET"	162E / Mintens	1621 E. MEGNACO	LAME BUH SOLVERY
PROPERTIES														ĺ
Nonflammable						•								
Evaporation rate (1=slow, 5=fast)	5	5	5	4	5	5	5	5	5	3	4	4	4	
VOC% (EPA) - Aerosol	75	64	64	69	-	37	13	65	12.6	75	75	75	-	
VOC% (EPA) - Bulk	-	-	-	-	61	49	18	-	-	100	-	-	100	
VOC% (CARB) - Aerosol	75	75	75	69	-	75	75	-	-	75	75	75	-	
VOC% (CARB) - Bulk	-	-	-	-	100	100	100	-	-	100	-	-	100	
APPLICATIONS														
Benchtop cleaning														
Ultrasonic	•									*			*	
Vapor degreasing														

NOTE: Test for substrate compatibility as a part of your qualification process.

<sup>\*</sup> Non-heated ultrasonic only



#### **Blue Shower Maintenance Cleaner**

#### Nonflammable, powerful cleaner

Clean oil and contaminants off of metal parts, printed circuit boards, barcode instruments, switch boxes, gear relays, and electronic motor controllers.

**1630-16S** 16 oz. (454g) aerosol



- Nonflammable
- Powerful cleaner
- Rapid evaporation
- Non-ozone depleting
- Dielectric strength 27.3 kv

Compliant with Boeing D6 17487, Rev T



#### **Industrial Maintenance Cleaner**

#### High power, fast evaporating maintenance cleaner

Blast away heavy oils and greases off of metal parts, gear boxes, and engines.

**1635-20S** 20 oz. (567g) aerosol



- All-in-one electronic maintenance & contact cleaner
- Rapid evaporation
- Non-ozone depleting
- Low toxicity compared to TCE, nPB & Perc
- Dielectric strength 30.5 kv



#### **Universal Cleaner**

#### Nonflammable, powerful liquid cleaner

Engineered to remove oils, fluxes and other contamination using a manual soak cleaning process or ultrasonic equipment.

1638-G1 gal. (3.8L) pail1638-5G5 gal (19L) pail1638-54G54 gal. (205L) drum



• Nonflammable

- Powerful cleaner
- Effective as maintenance cleaner and flux remover
- Rapid evaporation
- Non-ozone depleting
- Dielectric strength 27.3 kv



#### **Contact Cleaner**

#### Nonflammable, powerful contact cleaner

Clean oxidation, oil, and other contaminants from contacts, metal switches, relays, edge connectors, buss bars, and circuit breakers.

**1632-16S** 16 oz. (454g) aerosol



#### • Nonflammable

- Powerful cleaner
- Rapid evaporation
- Non-ozone depleting
- Dielectric strength 36.2 kv

Compliant with Boeing D6 17487, Rev T  $\,$ 



#### Flux Remover & Maintenance Cleaner

#### Nonflammable and powerful precision cleaner

Clean off flux residues, oil, and other contamination from electronics and other sensitive surfaces.

1651-16S16 oz. (454g) aerosol1651-G1 gal. (3.8L) pail1651-5G5 gal. (19L) pail1651-54G54 gal. (205L) drum



#### • Nonflammable

- Low VOC
- Safe on most plastics
- High precision residue-free
- Rapid evaporation
- Non-ozone depleting



# PRECISION

#### **Plastic-Safe Universal Cleaner**

Plastic-safe, nonflammable cleaner for sensitive electronics

Engineered for use on sensitive plastic electronic components, packaging and casements.

**1652-10S** 10 oz. (284g) aerosol **1652-G** 1 gal. (3.8L) pail

Specifications: NESHAP 63.741-753



- Nonflammable
- Low VOC
- Safe on sensitive plastics
- High precision residue-free
- Rapid evaporation
- Non-ozone depleting
- Dielectric strength 23 kv

# **Specialized Degreasers for Aviation and Aircraft Parts**

These specially engineered aviation degreasers quickly remove hydraulic fluid, fuel oils, lubricating oils and greases, and other organic residues. They are fast evaporating, quick penetrating, and ideal for cleaning aviation parts. Both are free of hazardous

air pollutants (HAPs), and CARB compliant.





- Fast evaporation
- Zero residue
- Non-ozone depleting
- Does not contain n-propyl bromide
- Dielectric breakdown of 13.7 kV
- CARB compliant



#### **Aviation Degreaser**

Exceptional nonflammable cleaner for aircraft parts degreasing

**2851-20S** 20 oz (567g) aerosol

Specifications: Meets Airbus UK ABR9-0140 General Purpose Cleaning Solvent, FedEx CPN 0311737, Boeing D6 17487, Rev T



### **Aviation Degreaser II**

NESHAP compliant cleaner for removing hydraulic and lubricating fluids

**1647-16S** 16 oz. (454g) aerosol

Specifications: Meets Boeing D6 17487, Rev T, NESHAP 63.741-753



#### • Nonflammable

- $\bullet \ \mathsf{Low} \ \mathsf{VOC} \ \mathsf{/} \ \mathsf{NESHAP} \ \mathsf{compliant}$
- Fast evaporation
- Zero residue
- Non-ozone depleting
- Does not contain n-propyl bromide
- Dielectric breakdown of 11.9 kV
- CARB compliant

# More Choices for Aviation Cleaning:

Compliant with Boeing D6 17487, Rev T:

G3 Blue Shower Maintenance Cleaner (1630-16S)

G3 Blue Shower Contact Cleaner (1632-16S)



#### **Blue Shower Maintenance Cleaner**

#### Powerful and economical aerosol cleaner

Clean oil and contaminants off of metal parts, printed circuit boards, barcode instruments, switch boxes, gear boxes, and engines.

1620-10S 10 oz. (284g) aerosol



- Powerful cleaner
- Ideal for sensitive plastics
- Low toxicity
- Non-ozone depleting



#### Flux Remover & Maintenance Cleaner

#### Powerful and economical liquid cleaner

Engineered to remove oils, fluxes and other contamination using soak cleaning process or ultrasonic equipment.

1 gal. (3.8L) pail 1621-G 1621-5G 5 gal (18.9L) pail 54 gal. (204L) drum 1621-54G



- Effective as maintenance cleaner and flux
- Ideal for sensitive plastics
- For cold cleaning and ultrasonic (unheated only)
- Non-ozone depleting



#### **Contact Cleaner**

#### Powerful and economical electronic contact cleaner

Clean oxidation, oil, and other contaminants from contacts, metal switches, relays, edge connectors, buss bars, and circuit breakers.

1622-10S 10 oz. (284g) aerosol 1622-135 13 oz. (369g) aerosol





@ W 1622-135

• Powerful cleaner

- Ideal for sensitive plastics
- Low toxicity
- Non-ozone depleting



#### **IPA Electronics Cleaner**

#### 99.8% IPA in convenient aerosol package

Ideal for defluxing, stencil cleaning and fiber optic connector cleaning.

1610-12S 12 oz. (340g) aerosol

Specifications for 99.8% IPA: Fed spec TT-1-735A (amend 3, notice 2) grades A&B, ASTM D770-05





- Compliant with SCAQMD rule 1171
- Plastic safe
- Low toxicity
- Non-ozone depleting



### **Zero-VOC General Purpose Cleaner**

#### General purpose remover of adhesives and coatings

Ideal for heavy-duty degreasing and for removing paint, coatings and sticky adhesive residues. Because it is VOC-free, there are no VOC restrictions – even in southern California!

1611-P 1 pt. (473mL) can



- Pure acetone
- Ideal for removing inks & adhesives
- VOC exempt
- Low toxicity
- Fast evaporation
- Non-ozone depleting

Note: test first on plastics and painted surfaces to check for compatibility.



### **Eco-Shine™ Glass & Surface Cleaner**

#### Eco-friendly, nonflammable, streak-free glass cleaner

Cleans glass, stainless steel, chrome, mirrors, tile, plastic, ceramic and enamel and leaves a streak-free finish.

**1505-QT** 1 qt. (0.95L) w/ trigger sprayer

**1505-G** 1 gal. (3.8L) jug



- Streak-free
- Nonflammable
- Non-ammoniated safe on sensitive surfaces
- Low VOC, no GWP
- Non-ozone depleting

#### **Glass Cleaner**

#### Foaming aerosol glass and surface cleaner

**1625-18S** 18 oz. (510g) aerosol



- Foaming action
- Streak-free
- Safe on glass & plastics
- Nonflammable

Specifications: GM H1018, Ford Tox #142432

#### **Roller Rejuvenator & Platen Cleaner**

#### Rubber roller cleaner and rejuvenator

Citrus-based solvent designed to clean and revitalize rubber rollers and platens. Improves rubber roller grip and reduces misfeeds and jams.

**1612-2SQ** 2 oz. (59ml) bottle



- Improves roller grip
- Natural citrus-based solvent
- Safe on most plastics

Specifications: Ford Tox #142415

Note: Not available in California

#### **Label & Adhesive Remover**

#### Fast acting, citrus-based label and adhesive remover

Citrus-based solvent safely and effectively removes labels and adhesive gums off equipment and products. Penetrates quickly and allows label to be peeled off without gummy residue.

**1613-6S** 4.5 oz. (128g) aerosol



- Removes labels and adhesive without scraping
- Penetrates rapidly
- Citrus-based solvent
- Safe on most plastics

Note: Not available in California

#### **Adhesives**

Low soak-in adhesive exhibits particular strength when bonding surfaces such as dry wall, brick and concrete block. Heavy Duty Adhesive will also work on surfaces such as paper, plastic, foam, wood and other fabrics. Excellent for both temporary and permanent bonds.

**Heavy-Duty Adhesive** 

**3500-11S** 12 oz. (340g) aerosol

**Economy Adhesive** 

**3505-11S** 12 oz. (340g) aerosol

**Contact Adhesive** 

**3510-12S** 12 oz. (340g) aerosol



3505-115

- High strength
- Fast tacking
- Water resistant
- Non-wrinkling



# **Flux Removers**

Flux removers (defluxers) remove flux residues and other contaminants left by manufacture, rework, or repair of printed circuit boards. Residues from higher, lead-free temperatures are more baked on and harder to clean. PWR-4<sup>™</sup>, G3<sup>®</sup>, E-LINE<sup>™</sup> and Precision-V<sup>™</sup> flux removers have been proven very effective at removing fluxes baked on at lead-free temperatures.

Micro-components and fine pitch leads are delicate and easily damaged, so brushing and scrubbing should be avoided if possible. Both G3, E-LINE™ and Precision-V have a powerful spray and strong solvent that blasts off residues and cleans areas under components that a brush cannot touch.

Techspray offers traditional solvent-based cleaners and cutting edge water-based technologies marketed under the Techspray Renew<sup>™</sup> brand.



TECHSPRAY RENEW™ branded cleaners are innovative solutions that combine the best of current "green" technologies to make the most powerful eco-friendly cleaners on the market.



- Help create bright, shiny solder joints
- Improve PCB reliability
- Prevent conformal coating defects
- Prevent corrosion from contamination
- RoHS compliant

<b>FLUX</b>	REN	IOV	ER	SEL	.EC	TIO	N (	GU	ID	Ε
									- /	

		Fly Rem	Remover	Rean Films	Solvent	, / A	1-VMaC	1 New Years		PLY PORT	INCY SIMT.	001 1805 5M126
	3401 PM	1637 WRAHWARM	1634 S. HWYRMOVA.	1638 Clan Allins	1657 p. W. 50Went	1649 P. Pecision-V	1652 p. Ma.C.	1670 L'Acsion VPACE	16275	1550 E MURRAIN	1520 E MARY SMT.	1530 Fe MWP-SM72
PROPERTIES												
Nonflammable												
Evaporation rate (1=slow, 5=fast)	5	5	5	5	5	5	5	3	4	1	1	1
VOC% (EPA) – Aerosol	73	64	64	-	37	64	13	75	75	-	-	-
VOC% (EPA) – Bulk	95	-	-	61	49	-	18	100	-	45	22	52
VOC% (CARB) - Aerosol	70	75	75	-	75	75	75	75	75	-	-	-
VOC% (CARB) – Bulk	100	-	-	100	100	-	100	100	-	45	52	22
APPLICATIONS												
Benchtop cleaning		•		•		•						
Ultrasonic				•			8	*	•	•	•	•
Vapor degreasing					•							
Inline defluxing system										•	•	
Batch defluxing system										•	•	

NOTE: Test for substrate compatibility as a part of your qualification process.

\* Non-heated ultrasonic only + Rinse required

# **Solvent Defluxers**



#### **Flux Remover**

#### Powerful, nonflammable and cost effective cleaner

Cleans away flux residues and other contaminants in vapor cleaning and ultrasonic application. Easily removes residues from high temperature lead free soldering operations, no-clean fluxes and all handling soils.

**3401-G** 1 gal. (3.8L) pail **3401-5G** 5 gal. (18.9L) pail **3401-54G** 54 gal. (204L) drum



- Nonflammable
- Much safer than most common industrial solvents — TCE, nPB, Perc & Methylene Chloride
- Powerful cleaner Effective on R, RMA & no-clean fluxes
- Available in bulk for vapor degreasing, ultrasonic and immersion cleaning
- Rapid evaporation
- Non-ozone depleting



#### **Flux Remover**

#### Strong and fast-acting flux remover

Remove flux residues and other contaminants left by manufacture, rework, or repair of printed circuit boards.

**1631-5S** 5 oz. (142g) aerosol w/brush attachment

**1631-16S** 16 oz. (454g) aerosol

**1631-16SB** 16 oz. (454g) aerosol w/brush attachment







Nonflammable

- Powerful cleaner
- Proven effective for lead-free processes
- All-in-one cleaner and defluxer
- Rapid evaporation
- Non-ozone depleting



#### **No-Clean Flux Remover**

#### Strong and fast-acting no-clean flux remover

Remove no-clean flux and white residues left by manufacture, rework, or repair of printed circuit boards.

**1634-12S** 12 oz. (340g) aerosol





- Ideal for no-clean fluxes
- Proven effective for lead-free processes
- Rapid evaporation
- Non-ozone depleting



#### **Universal Cleaner**

#### Nonflammable, powerful liquid cleaner

Engineered to remove oils, fluxes and other contamination from electronics using a manual soak cleaning process or ultrasonic equipment.

 1638-G
 1 gal. (3.8L) pail

 1638-5G
 5 gal (19L) pail

 1638-54G
 54 gal. (205L) drum



Nonflammable

- Powerful cleaner
- Effective as maintenance cleaner and flux remover
- Rapid evaporation
- Non-ozone depleting
- Dielectric strength 27.3 kv



## PRECISION

#### **No-Clean Flux Remover**

#### Nonflammable and powerful cleaner for the toughest flux residues

Engineered to cut flux residues from the most difficult-to-clean processes. Removes lead-free and no-clean residues, and white residues left by manufacturing, rework, or repair of circuit boards.

**1649-12S** 12 oz. (340g) aerosol



- Effective on R, RMA, no-clean and OA fluxes
- Nonflammable
- Non-ozone depleting
- Rapid evaporation with no residue
- Safe on most plastics

# PRECISION

#### **Flux Remover & Maintenance Cleaner**

#### Nonflammable and powerful precision cleaner

Formulated to reduce VOCs within your facility. Ideal for aviation and other applications where strict VOC caps apply (based on EPA VOC exemptions). Bulk chemicals ideal for soak cleaning and ultrasonics (not intended for vapor degreaser).

1651-16S16 oz. (454g) aerosol1651-G1 gal. (3.8L) pail1651-5G5 gal. (19L) pail



1651-16S

Nonflammable

- Low VOC
- High precision residue-free
- Rapid evaporation
- Non-ozone depleting
- Safe on most plastics



#### **Plastic-Safe Universal Cleaner**

#### Plastic-safe, nonflammable cleaner for sensitive electronics

Plastic-safe formula is engineered for use on sensitive plastic components, packaging and casements. Ideal for optics cleaning, critical electronics and other sensitive surfaces. Qualifies under the aerospace NESHAP VOC guidelines.

**1652-10S** 10 oz. (283g) aerosol **1652-G** 1 gal. (3.8L) pail



Nonflammable

- Low VOC
- Safe on sensitive plastics
- High precision residue-free
- Rapid evaporation
- Non-ozone depleting

Specifications: NESHAP 63.741-753



#### Flux Remover & Maintenance Cleaner

#### Powerful and economical flux remover

Hydrocarbon-based defluxer formulated to be powerful, yet very economical. Eliminates brushing and scrubbing, saving time and materials.

**1621-10S** 10 oz. (283g) aerosol

**1621-10SB** 10 oz. (283g) aerosol w/brush attachment

 1621-G
 1 gal. (3.8L) can

 1621-5G
 5 gal (19L) pail

 1621-54G
 54 gal (205L) drum



-10S 1621-10SB

- Powerful cleaner
- Proven effective for leadfree processes
- Ideal for sensitive plastics

Specifications: GM H1013; USDA Accepted; Ford Tox #142431, USDA: Approved K-2 rated aerosol and bulk.

#### **Envi-Ro-Tech™ Defluxer**

#### Alcohol-based flux remover and maintenance cleaner

Alcohol-based general duty defluxer and all-purpose cleaner for light oils, silicones, handling soils and other contaminants found in electronics manufacturing.

**1679-PT** 1 pt. (473mL) bottle w/trigger sprayer



- Convenient and easy-to-use trigger sprayer
- Safe on plastics
- Ideal for removing handling soils







# **Vapor Degreaser Solvents**

Techspray offers a wide variety of vapor degreaser formulas engineered to meet challenging requirements like cleanliness specifications, difficult-to-clean soils, solvent-sensitive materials, and restrictive regulations.

All Techspray solvents have azeotropic properties that allow them to remain stable as they are cycled in a vapor degreaser. They are not reactive or corrosive to metals commonly found in the construction of vapor degreasers.

PWR-R™ solvents are designed to replace nPB, TCE and Perc, matching and surpassing cleaning performance without the safety concerns.

Precision-V<sup>™</sup> vapor degreaser solvents are ideal replacements for AK-225 based cleaners, which were phased out due to the ozone depletion restrictions of the Montreal Protocol.

To order, add the following to the part # shown in the chart below:

- -1G for 1 gal. (3.8L)
- -5G for 5 gal. (19L)
- -54G for 54 gal. (205L)



Part #	Product Name	Base Solvents	kB value	Boiling Point (°F/°C)	VOC (g/l)	GWP	Degreasing	Defluxing	Plastic- Safe
1654	VC-1200	DuPont Vertrel® XF	56	94/34	552	684			
1655	VC-1500	DuPont Vertrel® XF	62	90/32	562	663		•	
1656	VC-1600	DuPont Vertrel® XF	100	106/41	1063	264			
1686	ME-1500	3M Novec 7100/7200	58	104/40	889	43			
1680	AE-1000	Asahi AE3000	~0	133/56	ND	540			
1681	AE-1400	Asahi AE3000	ND	139/54	ND	540			
3400	PWR4 Maintenance Cleaner	3M Novec 7100	100	118/48	1201	ND			
3401	PWR4 Flux Remover	3M Novec 7100	100	118/48	1201	ND			

ND=Not Defined



### **Water-Based Defluxers**

### **Eco-dFluxer**

Water-based Inline & Batch Flux Removers

Eco-dFLuxer cleaners are water-based, environmentally friendly and designed to work in both inline and batch cleaning equipment. They are optimal combinations of solvents and saponifiers that lower surface tension for penetration under low stand-offs, and powerful cleaning action to remove all flux residues.

Effective on a wide variety of solders and fluxes: lead, lead-free, aqueous, RMA, no-clean, and new halide-free fluxes. High compatibility with common PCB metals and plastics. Eco-dFluxer cleaners are highly filterable with long bath life.

High performance cleaning gives you brilliant solder joints and allows you to increase dilution, increase line speeds, reduce waste water, decrease cost per board, and most importantly... eliminate field failures due to ionic contamination!

- High performance cleaning
- Nonflammable
- Low VOC, zero GWP
- · Also used for pallet cleaning in batch systems

#### **Eco-dFluxer SMT100**

Powerful defluxer, allowing you to optimize your cleaning process. Reduce concentration and increase line speed to maximize your profit. Effective on no-clean, R, RMA and OA fluxes.

 1550-G
 1 gal. (3.8L) bottle

 1550-5G
 5 gal. (19L) container

 1550-54G
 54 gal. (205L) drum

#### **Eco-dFluxer SMT200**

Superior metals compatibility, preventing oxidation and leaving shiny solder joints. Eco-friendly formula reduces shipping and disposal costs. Effective with reduced concentration even on the toughest noclean, R, RMA, OA and new halide-free fluxes.

 1520-G
 1 gal. (3.8L) bottle

 1520-5G
 5 gal. (19L) container

 1520-54G
 54 gal. (205L) drum



#### **Eco-dFluxer SMT300**

Powerful defluxer but safe on sensitive metals, preventing oxidation and leaving shiny solder joints. Safe, eco-friendly formula. Effective on no-clean, R, RMA, OA fluxes and new halide-free fluxes.

**1530-G** 1 gal. (3.8L) bottle **1530-5G** 5 gal. (19L) container **1530-54G** 54 gal. (205L) drum

#### **Defoamer DF1**

#### Defoaming Agent for Inline & Batch Cleaners

Reduce foaming as cleaner becomes loaded to extend bath life. Add directly to sump at 1 to 4 fl oz. (30-120ml) per 100 gallons (379L). Dilute in spray bottle to 15% with DI water to eliminate foaming issue on the spot.

- Effective at all processing temperatures
- Extends bath life
- Silicone & particulate free
- Nonflammable

**1555-P** 1 pt. (473mL) container



HIGH PERFORMANCE ECO-FRIENDLY CLEANERS

# **Stencil Cleaners**

#### **Eco-Stencil UM**

#### Manual & Under Stencil Cleaner

- Quickly clean paste or uncured adhesive
- Safe for stencils, tools, misprinted boards
- Nonflammable
- Low VOC, zero GWP

#### **Applications:**

- Manual stencil tool, work surface, and squeegee cleaning
- Automatic underside wipe stencil cleaning
- Batch ultrasonic cleaning
- Removes unsoldered leaded & lead-free solder pastes
- Cleans off uncured adhesives

**1570-100DSP** 100 count pre-saturated wipes, 6"x8" (15cm x 20cm)

**1570-QT** 1qt. (0.95L) w/ trigger sprayer

**1570-G** 1 gal. (3.8L) bottle

**1570-GX10** 1 gal. (3.8L) concentrate makes 10 gallons (38L)



#### **Eco-Stencil AQ**

#### Water-Based Batch Stencil Cleaner

**1572-G** 1 gal. (3.8L) bottle **1572-5G** 5 gal. (19L) container **1572-54G** 54 gal. (205L) drum



1572-G

- For use in batch stencil cleaners with automatic or manual rinse
- Nonflammable
- Low VOC, zero GWP
- Highly concentrated 10% dilution

#### **Eco-Stencil RF**

#### Rinse-Free Batch Stencil Cleaner

 1571-G
 1 gal. (3.8L) bottle

 1571-5G
 5 gal. (19L) container

 1571-54G
 54 gal. (205L) drum



- Nonflammable
- Rinse-free
- Drop in replacement for IPA
- Effective at ambient temperature
- Low VOC, zero GWP
- Highly concentrated 20% dilution

## **Reflow Oven Maintenance**

#### **Eco-Oven**

#### Reflow Oven, Wave Finger & Pallet Cleaner

- Quickly clean flux residue from oven & wave fingers
- Safe on warm ovens
- Nonflammable
- Low VOC, zero GWP

#### **Applications:**

- Removal of baked-on flux residues from SMT oven and wave equipment
- Maintenance cleaning for heat exchange systems (NOTE: rinse thoroughly from aluminum and copper)
- Finger cleaning in wave solder equipment
- Remove accumulated flux from wave solder pallets

**1573-QT** 1 qt. (0.95L) w/ trigger sprayer

**1573-G** 1 gal. (3.8L) bottle **1573-5G** 5 gal. (19L) container





Wave fingers

#### **XT-Armor™ Oven Shield**

#### Reflow Oven & Wave Maintenance Coating

XT-Armor™ Oven Shield Reflow Oven & Wave Maintenance Coating is a water-based, environmentally friendly coating that is designed to protect PCB assembly equipment from flux residues. Flux sticks to the coating surface and then peels off – drastically reducing maintenance time

XT-Armor Oven Shield has been tested and proven compatible with all of the most popular oven and wave equipment: BTU, Heller, JTU, SMT, Speedline and Vitronics-Soltec.

- Coating & flux residues peel off easily
- Cures during equipment heat-up cycle
- Low odor, non-hazardous, nonflammable
- Easy wash-up with water
- Environmentally friendly zero VOC, zero GWP
- Halide-free prevent ionic contamination

#### **Applications:**

- $\bullet$  Protect cooling zones of reflow oven
- Coat around wave fluxer
- Coat top of wave pallet
- Mask overspray area in coating spray booth



3601-16SQ 3601-G

16 fl. oz. (473mL) squeeze bottle 1 gal (3.8L) bottle



**PROBLEM:** Cleaning requires over 8 hours of machine downtime and man hours, with harsh chemicals, brushes and scrapers.



**SOLUTION:** Flux contamination simply peels off, reducing downtime by 25% and labor by 50%.







# LICRONCRYSTAL

#### Permanent ESD Coating

- Rugged static dissipative coating
- Surface resistivity of 10<sup>6</sup> To 10<sup>9</sup> ohms
- Operating temperature range up to 302°F (155°C)
- Humidity independent
- Superior adhesion to variety of surfaces: glass, plastic, etc.
- Non-ozone depleting

1756-8S 8 oz. (226g) aerosol (coats up to 200ft<sup>2</sup>)

1756-G 1 gal. (3.8L) jug



1756-85



### **Zero Charge Anti-Stat Coating**

#### Anti-static coating for fabrics & flexible surfaces

- All-purpose static control
- For plastics, fabrics, and carpet
- Fast drying
- Nonflammable

1726-QT 1 qt. (.95L) bottle with trigger sprayer



#### **Zero Charge Mat & Tabletop Cleaner**

#### Safe, effective cleaner for ESD mats

- Rejuvenates ESD-safe mats
- Will not dry out surfaces
- Leaves no insulative film
- Nonflammable
- No ammonia
- Non-corrosive

1733-QT 1 qt. (.95L) bottle with trigger sprayer

1733-G 1 gal. (3.8L) bottle



#### Zero Charge® ESD-Safe Floor Coating

#### ESD-safe floor coating

- Resistivity between 10<sup>6</sup> To 10<sup>10</sup>
- Effective in low humidity
- High gloss polymer
- Zinc free
- Slip resistant

1720-G 1 gal. (3.8L) bottle (coats @1,200 ft<sup>2</sup>) 1720-5G 5 gal. (19L) pail (coats @6,000 ft<sup>2</sup>)



1720-G

#### **Zero Charge Hand Lotion**

#### Non-contaminating hand lotion for ESD sensitive environments

- Improves wrist and heel strap contact
- Does not contain silicone or lanolin
- Non-contaminating does not interfere with soldering
- Non-greasy

1702-8FP 8 fl. oz. (237ml) bottle with finger pump

1702-G 1 gal. (3.8L) bottle



1702-8FP

### **Zero Charge Screen & Keyboard Cleaner**

Cleans surfaces and leaves behind dissipative residue

1743-50PK 1743-QT

50 pre-saturated wipes in packets 1 qt. (.95L) bottle

w/trigger sprayer



1743-50PK

1743-OT

- Cleans plastic & glass
- Leaves ESD-safe coating
- Leaves no insulative film
- Nonflammable
- Non-corrosive





# **Conformal Coatings**

Techspray offers a variety of coating formulas to match field and engineering requirements. Specifications generally depend on the type of protection needed: e.g. thermal, moisture, and static resistance (see reference chart).

#### **Application method considerations:**

**Dip** - High volume method to fully coat boards. Thickness of final coating is controlled by viscosity and withdrawal speed from the pot.

**Selective spray system – Computer controlled selective spray** systems, eliminate the need for masking. Higher viscosity than full coverage sprayer is generally needed (70-200 cps) to create precise edge definition and prevent splattering.

**Manual Application** – Aerosol and brushing are generally used for small production runs, rework and repair. If using for rework, the aerosol needs to be compatible with the original coating.



#### 2102-125

- UL recognized
  - Thermal resistance to 392°F (200°C)
  - Dielectric strength 1100 volts/mil
  - Moisture resistant
  - Chemically resistant
  - Vibration resistant flexible

Specifications: Meets or exceeds MIL-I-46058C Type SR and IPC-CC-830B. UL94 V-0 rated.

TECHSPRAY

INE-L-KOTE



### FINE-L-KOTE™ SR

Silicone coating that's ideal for moisture and vibration protection

#### Standard Viscosity — 4-10 CPS

2102-125 12 oz. (355ml) aerosol 2102-P 1 pt. (473mL) can 2102-G 1 gal. (3.8L) can 2102-5G 5 gal. (19L) pail High Viscosity — 60-90 CPS 2102-GHV 1 gal. (3.8L) pail

#### FINE-L-KOTE™ HT

Silicone coating engineered for superior thermal and moisture resistance

2106-12S 12 oz. (355ml) aerosol 2106-G 1 gal. (3.8L) can



2106-125

- Designed for high temperature environments
- Fast-drying silicone 1-step process
- Thermal resistance to 662°F (350°C)
- Dielectric strength 560 volts/mil
- Moisture resistant
- Vibration resistant flexible

Specifications: Meets or exceeds MIL-I-46058C Type SR and IPC-CC-830B. UL94 V-0 rated.



#### FINE-L-KOTE<sup>™</sup> LED

# Silicone conformal coating designed to coat over LEDs

Coat directly over LEDs without the time and expense of masking. Optical clarity prevents light from diffusing, scattering, or changing wavelength. Fine-L-Kote LED provides maximum protection from extreme temperatures on the flexible and rigid PCBs found in LED displays.

**2120-P** 1 pt. (473mL) can **2120-G** 1 gal. (3.8L) can **2120-5G** 5 gal. (19L) pail



- Fully transparent will not block or change light intensity or wavelength
- Protects against adverse environments
- Flexibility prevents cracking
- Resists moisture, salt, fungus and corrosive vapors from severe environments
- Withstands high heat from PCB and operating environment

#### **CONFORMAL COATING SELECTION GUIDE**

	2120 Fine•L•Kote LED	2108 Turbo-Coat	2109 Turbo-Coat HV	2102 Fine•L•Kote SR	2102 HV Fine•L•Kote SR	2106 Fine•L•Kote HT	2104 Fine-L-Kote UR
Product Benefits	Optically Clear	Economical With Fastest Cure	Economical With Fastest Cure	Moisture & Vibration Resistant	Moisture & Vibration Resistant	High Operating Temperature	Durable & Chemically Resistant
Selective Spray System	•	0	•	0	•	•	•
Atomized Spray System	•	•	•	0	•	0	•
Dip	•	•	•	•	•	•	•
Aerosol Available	NO	YES	USE 2108-12S	YES	USE 2102-12S	YES	YES
Thermal Resistant	•	0	0	•	•	•	0
Moisture /Fungus Resistant	•	0	0	•	•	•	•
Chemical Resistant	•	0	0	•	•	•	•
Vibration Resistant	•	0	0	•	•	•	0
Ease of Rework	•	•	•	•	•	•	0
Tack Free Time (minutes)	60	3	9	60	60	45	15
Accelerated Cure Time/Temp	2 Step 30 Min.@ 32°C 45 Min.@ 93°C	1 Step 20 Min.@ 65°C	1 Step 55 Min.@ 55°C	2 Step 30 Min.@ 32°C 45 Min.@ 93°C	2 Step 30 Min.@ 32℃ 45 Min.@ 93°C	1 Step 15 Min.@ 49°C	2 Step 20 Min.@ 49°C 30 Min.@ 82°C
Ambient Cure Time Mil-I-46058C /	72 Hrs.	<15 Hrs.	<15 Hrs	72 Hrs.	72 Hrs.	24 Hrs.	24 Hrs.
IPC-CC-830 Qualified		YES	YES	YES	YES	YES	YES
UL 94 Rated		V-0	V-0	V-0	V-0	V-0	V-0
Solids Content (% by weight)	47%	Aerosol 7% Bulk 17%	Bulk 24%	Aerosol 11% Bulk 14%	Bulk 55%	Aerosol 16% Bulk 25%	Aerosol 7% Bulk 20%
Viscosity (centipoise)	Bulk 60-70	Aerosol 10-20 Bulk 15-25	Bulk 55-60	Aerosol 4-10 Bulk 4-10	Bulk 70-80	Aerosol 15-25 Bulk 15-25	Aerosol 12-22 Bulk 10-20
UV Indicator	NO	YES	YES	YES	YES	YES	YES
Operating Temp Range	-65° to 200° C	-65° to 125° C	-65° to 125° C	-65° to 200° C	-65° to 200° C	-40° to 350° C	-30° to 121° C
Dielectric Strength	1 kV/Mil	1 kV/Mil	1 kV/Mil	1.1 kV/Mil	1.1 kV/Mil	560 V/Mil	380 V/Mil
Dielectric Constant				2.66	2.66	2.5	3.8
Insulation Resistance (ohms)		4.89 x 10 <sup>16</sup>	4.89 x 10 <sup>16</sup>	6.87 x 10 <sup>15</sup>	6.87 x 10 <sup>15</sup>	1.33 x 10 <sup>16</sup>	1.78 x 10 <sup>16</sup>
VOC	Bulk 54%	Aerosol 33% Bulk 64%	Bulk 7%	Aerosol 46% Bulk 58%	Bulk 46%	Aerosol 51% Bulk 79%	Aerosol 52% Bulk 80%





#### **Acrylic Conformal Coating**

2108-12S12 oz. (355ml) aerosol2108-P1 pt. (473mL) can2108-G1 gal. (3.8L) can2108-5G5 gal. (19L) pail



2108-125

- Fastest cure dry to touch in 3 minutes!
- Low toxicity
- No Toluene, Xylene or MEK
- UL94 V-0 rated nonflammable final coat
- Fast & easy rework & repair
- UV indicator for black light QC inspection

Specifications: Meets or exceeds MIL-I-46058C Type AR and IPC-CC-830B. UL94 V-0 rated.

# TURBO-GOAT HY

#### **Acrylic Conformal Coating**

**2109-F** 1 pt. (473mL) can **2109-G** 1 gal. (3.8L) can **2109-5G** 5 gal. (19L) pail



2109-G

- Designed for selective sprayers
- · Low toxicity
- No Toluene, Xylene or MEK
- Dry to touch in under 10 minutes!
- UL94 V-0 nonflammable final coat

Specifications: Meets or exceeds MIL-I-46058C Type AR and IPC-CC-830B. UL94 V-0 rated.

#### FINE-L-KOTE™ UR

#### **Urethane Conformal Coating**

**2104-125** 12 oz. (355ml) aerosol **2104-G** 1 gal. (3.8L) can **2104-5G** 5 gal. (19L) pail



2104-125

- Thermal resistance to 248°F (120°C)
- Dielectric dtrength 380 volts/mil
- Moisture resistant
- Chemically resistant
- Abrasion resistant
- UL94 V-0 nonflammable final coat

Specifications: Meets or exceeds MIL-I-46058C Type UR and IPC-CC-830B. UL94 V-0 rated.

### **Conformal Coating Remover**

Quickly and precisely removes most conformal coatings including acrylic, urethane, and silicone.

**2510-N** 10 ml pen **2510-P** 1 pt. (473mL) can



2510-P



2510-N

- Fast stripping action
- Non-corrosive
- Rapid evaporation

#### FINE-L-KOTE<sup>™</sup> Thinner

Thin Fine-L-Kote coatings to meet production requirements.

**2105-G** 1 gal (3.8L) can



#### **Turbo-Coat Thinner**

If viscosity needs to be lowered, Turbo-Coat Thinner is ideally matched to Turbo-Coat coatings.

**2110-P** 1 pt. (473mL) can **2110-G** 1 gal. (3.8L) can



2110-G



# **Temporary Solder Masks**

Techspray's WonderMASK is the industry leading temporary solder mask brand because of quality and versatility. Depending on the product, mask can be peeled off manually, or washed off in a batch or inline system.

All Techspray WonderMASK products have the following advantages:

- Can be cured in pre-heat
- Withstands lead-free soldering temperatures up to 640°F (343°C) in wave soldering process
- RoHS compliant

### Washable Masks Used with aqueous cleaning processes.

#### WonderMASK WSOL

#### Water-washable mask, safe on ion beds and filters

Ideal water-washable mask for closed-loop systems. Quickly and easily removed with in-line and batch cleaning system

2204-8SQ 8 fl. oz. (237mL) squeeze bottle

2204-G 1 gal. (3.8L) bottle





- Safe on ion beds & filters in closed-loop cleaning systems
- Non-corrosive

NSVWJapuom NSVWJapuom Japun

Low odor

#### WonderMASK W

#### Nonflammable, water-washable

Quick drying water-washable mask. Quickly and easily removed with in-line and batch cleaning systems.

Note: do not use in closed-loop wash systems.

#### **Hand Applications:**

2205-8SQ 8 fl. oz. (237mL) squeeze bottle

2205-G 1 gal. (3.8L) bottle **Robotic & Pneumatic Applications:** 2206-G 1 gal. (3.8L) bottl



- Water washable
- Non-corrosive
- Low odor
- Nonflammable

Specifications: Meets MIL-STD-2000 paragraph 5.3.18 parts a,b, and d. (2206) HP 8500-4214

#### TEMPORARY SOLDER MASK SELECTION GUIDE

PRODUCT	APPLICATION	VISCOSITY	SUGGESTED THICKNESS	THINNER	CURE TIME	REMOVAL
PEELABLE						
2211 WonderMASK P	Template, Hand, Pneumatic, Robotic	28,000 — 32,000 cps	20 — 30 mils	D.I. Water	1 hr. Ambient 30 min. @65° C 20 min. @82° C	Peelable
2222 WonderMASK PX	Hand Applied	9,000 — 16,000 cps	15 mils	D.I. Water	15 min. Ambient	Peelable
TC-533 Techform	Hand Applied	9,000 — 15,000 cps	15 mils	D.I. Water	1 hr. min. Ambient 30 min. @65° C	Peelable
WATER-SOLUBLE						
2204 WonderMASK WSOL	Hand, Pneumatic	11,500 — 15,500 cps	5 — 15 mils	Methanol	30 min. @65° C	Soluble in Water 49° C or higher
2205 WonderMASK W	Hand Applied	8,000 — 12,000 cps	10 — 15 mils	D.I. Water	30 min. @80° C 1-2 hrs. Ambient	Soluble in Water 49° C or higher
2206 WonderMASK W	Pneumatic, Robotic	6,050 — 6,450 cps	10 — 15 mils	D.I. Water	1-2 hrs. Ambient 30 min. @80° C	Soluble in Water 49° C or higher





### Peelable Masks Used with solvent cleaning and no-clean processes.

#### WonderMASK PX

#### Natural latex peelable solder mask with fastest cure time.

Natural latex temporary solder mask that is specially formulated to cure in half the time of other masks.

WonderMASK PX cures over its entire surface area, including where it adheres to the PCB. This allows it to be peeled quickly and easily when other masks are still sticky at the bottom. Even the thickest bead of mask cures completely.

Specifications: Meets MIL-STD-2000 paragraph 5.3.18 parts a, b, and d.

- Fastest full cure
- Easily peelable
- Highest strength to avoid breakage
- Nonflammable

2222-8SQ 8 fl. oz. (237ml) squeeze bottle

2222-G 1 gal. (3.8L) bottle





WonderMASK PX peels after 15 min.



Typical mask after 15 min.

#### WonderMASK P

#### Non-ammoniated, low odor peelable mask

Techspray's original ammonia-free synthetic latex peelable solder mask. Specifications: MIL-STD-2000 paragraph 5.3.18 parts a,b, and d. Ford Tox #039772.

2211-8SQ 8 fl. oz. (237mL) squeeze bottle

2211-G 1 gal. (3.8L) bottle 2211-5G 5 gal. (19L) pail 2211-54G 54 gal. (205L) drum



• Easily peelable • Low odor

- Cure indicator darkens as it cures
- Compatible with gold and copper leads
- Non-corrosive
- Nonflammable



## **Techform TC-533 Peelable Mask**

Kester peelable mask is a high-temperature flexible solder masking compound specially formulated of natural latex rubber. Prevent solder from flowing into contacts, terminals, screw heads and plated through holes.

Latex has been chemically enhanced so that it is heat stable enough for wave soldering processes. Effectively mask and protect the board from the time it is manufactured, through all assembly and reflow operations.

NOTE: Not recommended on bare copper because ammonia may cause discoloration.

- Fast cure
- Easily peelable
- Will not tarnish gold or phosphor bronze
- Protects delicate components
- Nonflammable

#### 53-4001-0533

1pt. (0.47L) squeeze bottle

#### 53-4003-0533

1 gal. (3.8L) bottle

#### 53-4004-0533

5 gal. (19L) pail



53-4001-0533

NON-FLAM

SAFE ON P



# **Freeze Sprays**

Freeze sprays blast fast evaporating liquid that super-chills isolated areas. Used as a troubleshooting aid for intermittently faulting capacitors, resistors, semiconductors, and other defective components. They also increase visibility of cold solder joints, cracks in printed circuit boards and oxidized junctions.

- Nonflammable
- Safe on plastics
- Zero residue
- Moisture free
- Non-ozone depleting
- VOC exempt

#### Freeze Spray Pure HFC-134a freeze Spray

- Chills down to -60°F (-51°C)
- Nonflammable
- Safe for energized equipment

1672-10S 10 oz. (283g) aerosol 1672-15S 15 oz. (425g) aerosol **CAN1672-10S** 10 oz. (283g) aerosol

Canada compliant packaging



1672-10S





1672-155

## Anti-Static Freeze Spray

ESD-Safe Diagnostic Freeze Spray

1747-10S 10 oz. (283g) aerosol



1747-10S

- Avoids static build-up
- Prevents latent failures
- Chills down to -60°F (-51°C)
- Nonflammable
- No frost buildup

#### **Eco-Freezer**

#### **Eco-Friendly Freeze Spray**

Eco-Freezer is formulated with new HFO-1234ze propellant, with a fraction of the global warming potential (GWP) of HFC-134a based freeze sprays. HFO-1234ze has a GWP of 6, compared to HFC-134a with GWP of 1300. Eco-Freeze can be a drop-in replacement when GWP needs to be lowered.

1583-10S 10 oz. (283g) aerosol



- Chills down to -49°F (-45°C)
- GWP less than 1/100th of HFC-134a
- Nonflammable
- Non-ozone depleting



# **Desoldering Braid**

Desoldering braid (wick) is pre-fluxed copper braid that is used to remove solder, which allows components to be replaced and excess solder to be removed.

Techspray wick is available in static dissipative bobbins (except where indicated) for static sensitive environments.

Techspray No-Clean wick is coated with proprietary flux that only leaves a slight clear residue, which does not cause service issues. Cleaning after using Techspray No-Clean wick is strictly optional.

Specifications: Meets or Exceeds MIL-F-14256; NASA NHB 5300, 4 (34-1); NASA NPC 200-4; NASA SP5002; 1821:HP 8690-0588; 1823: HP 8690-0577; IPC Standard-J-STD-004

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MADE IN USA

#### Pro-Wick® Rosin — ESD-Safe Bobbin (🕰)

For the fastest wicking action, rosin flux coated braid is ideal for high volume PCB production/repair environments.

		Size/Color	5′	10′	25′	100′	500′
	1808	#1 White	1808-5F	1808-10F		1808-100F	
TEGHSPRAY.	1809	#2 Yellow	1809-5F	1809-10F	1809-25F	1802-100F*	1802-500F*
14 S S S S S S S S S S S S S S S S S S S	1810	#3 Green	1810-5F	1810-10F	1810-25F	1810-100F	1803-500F*
PANWICK	1811	#4 Blue	1811-5F	1811-10F	1811-25F	1811-100F	1804-500F*
	1812	#5 Brown	1812-5F	_			
	1813	#6 Red	1813-5F	_	_	_	_

\* Not packaged in ESD-safe bobbins

### No-Clean Wick — ESD-Safe Bobbin 🖾

The cleanest No-Clean braid in the industry. The proprietary flux formula is specially designed to avoid catastrophic and latent PCB failures caused by ionic flux residue.

		Size/Color	5′	10′	25′	50′	100′
	1820	#1 White	1820-5F	1820-10F	_	1820-50F	
TEGHSPRAY.	1821	#2 Yellow	1821-5F	1821-10F	1821-25F	1821-50F	_
1521-10F *2 1021 3 m	1822	#3 Green	1822-5F	1822-10F	_	1822-50F	1822-100F
NO CLEAT	1823	#4 Blue	1823-5F	1823-10F	1823-25F	_	1823-100F
OL.	1824	#5 Brown	1824-5F		1824-25F		_
	1825	#6 Red	1825-5F	_	_	_	_

### Unfluxed Wick — ESD-Safe Bobbin 💪

For customers who use water-soluble flux, or their own flux for aqueous processes.

		Size/Color	5′	10′
TEGHSPRAY.	1830	#1 White		1830-10F
1832-5F	1831	#2 Yellow	_	1831-10F
UM MADE IN USA CO	1832	#3 Green	1832-5F	
WEZUK V	1833	#4 Blue	_	1833-10F



Match braid width to contact area





# **Rework & Repair Pens**

# TraceTech"

#### Flux Remover Pen

Spot cleaning for PCB rework and repair

2506-N Single-pack of 11.5 ml pen



- Safe on plastics
- Rapid evaporation
- Pen tip allows controlled application

# TraceTech<sup>™</sup>

#### **No-Clean Flux Dispensing Pen**

No-clean flux applicator pen for PCB rework and repair

2507-N Single-pack of 11.5 ml pen

2507-N100 144 pack of 11.5 ml pens, 12 boxes of 12



- Excellent wetting
- Works with lead and lead-free solders
- Boost wetting for lead-free wire solder
- No cleaning necessary

# **TraceTech**

#### **Conductive Pen**

Silver ink pen for repairing electronic traces

2505-N Single-pack of 4.9 ml pen



- Repairs traces
- Makes smooth jumpers

# **TraceTech**

#### **Overcoat Pen**

Resist repair pen for PCB rework and repair

Single-pack of 5 ml pen 2509-GN



- Repairs solder resist
- Green to match resist
- Prevents shorting and arcing

# TraceTech"

#### **Conformal Coating Remover Pen**

Spot coating remover in applicator pen for PCB rework and repair

2510-N 10 ml pen 2510-P 1 pt. (0.47L) can



- Fast stripping action
- Non-corrosive
- Rapid evaporation

# **Heat Sink / Transister Grease**

### **Silicone Heat Sink Compound**

Heat sink compound for electrical applications

1977-DP 4 oz. (118ml) squeeze tube



- Thermal conductivity 0.70 W/m-K
- Functional temperature Range -67°F to 401°F (-55°C to 205°C)
- Easy application
- Will not harden and crack

### Silicone-Free Heat Sink Compound

Heat-sink for electronics, avoid silicone contamination

1978-DP

4 oz. (118ml) squeeze tube

1978-1

1 lb. (454g) jar



- Thermal conductivity 0.92 W/m-K
- Functional temperature range -40°F to 392°F (-40°C to 200°C)
- Avoid solder defects due to silicone contamination
- Easy application
- Will not separate
- Will not harden and crack



# **TECHSPRAY®**

# **Wipes**

Techspray offers a large array of wipes for a variety of applications, including cleanroom, PCB rework, polishing, and maintenance. A large number of different materials are available to meet each unique requirement.

•Cleanroom Wipers: Meet the particulate count and extractables for Class 10 / ISO Class 4 and Class 100 / ISO Class 5 cleanrooms.





- Maintenance Wipers: Lower cost, high quality wipers for heavyduty cleaning.
- Delicate Task Wipers: Cellulose tissue for light cleaning, like in lab settings.
- Microfiber Wipes: Polishing wipes that are ideal for screen and display cleaning, with or without a cleaner.
- SMT Roll Wipes: DEK and MPM understencil roll wipes to fit the most common printers.



#### **TECHCLEAN® WIPES SELECTION GUIDE**

Key:  $\bullet$  = Best  $\bullet$  = Acceptable  $\bullet$  = Not applicable / Not recommended

			Properti	es		Application							
	Cleanroom	Material	Construction	Absorbency	Strength	Electronics	ESD- Sensitive	LCD Cleaning	Stencil Cleaning	Lab	Optics	Industrial	Office
2340 Cotton Wiper		Cotton	Non- woven	•	0	•	0	0	•	•	0	•	•
2342/2343 Task Wipers	n/a	Poly / Cellulose	Non- woven	0	0	•	0	0	0	•	•	0	0
2350 Wiper	100 / ISO 5	Poly / Cellulose	Non- woven	•	0	•	0	0	•	•	0	•	•
2351/2352 Absorbwipe	100 / ISO 5	Polyester	Non- woven	0	0	•	0	0	0	0	•	0	0
2355 Purewipe	100 / ISO 5	Polyester	Knit	0	•	•	0	0	•	•	0	•	•
2357 Twill Wipe	n/a	Cotton	Woven	•	•	0	0	0	0	0	0	•	•
2358 SMT Wipe	100 / ISO 5	Poly- urethane	Foam	•	0	0	0	0	•	0	0	0	0
2359/2364/2365 Maintenance Wipe	n/a	Poly / Cellulose	Non- woven	•	0	•	0	0	•	•	0	•	•
2362 Antistatic Wipe	10 / ISO 4	Polyester	Knit	0	•	•	•	0	0	•	0	0	0
2363 Microfiber Wipe	n/a	Poly / Nylon	Knit	0	•	0	0	•	0	0	•	0	•
2366/2367 Roll Wipes	n/a	Poly / Cellulose	Non- woven	•	0	0	0	0	•	0	0	0	0
2368 LCD Wipe	n/a	Nylon	Knit	0	•	0	0	•	0	0	0	0	•



# TechClean Wiper (100)

General Purpose Wipe



Hydroentangled cellulose/polyester wipe with high absorbency and extra low particulate count and no chemical extractables.

100 - 8"x10" (20cm x 25cm) c-fold wipes, 2350-100

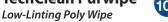
double-bagged



- Class 100 cleanroom qualified
- High absorbency
- Very low particulate count

Specifications: Exceeds U.S. Air Force requirements for surface contamination, HP 9300-1618

### **TechClean Purwipe™**



100% polyester wipe is a strong, low-linting wipe that is ideal for SMT stencil cleaning and PCB rework. Tear resistant to allow cleaning around leads without fraying.

2355-100 100 - 9"x9" (23cm x 23cm) flat wipes, double-bagged



- Class 100 cleanroom qualified
- Very low particulate count
- Tear resistant

#### **Cotton Cleanroom Wiper**

This hydroentangled cotton wipe has high absorbency with extra low particulate and chemical extractables. Ideal for stencil cleaning.

2340-100 100 - 9" x 9", (23cm x 23 cm),

flat wipes, double-bagged



- Low chemical extractables
- Lint-free & soft
- Biodegradable & sustainable
- High absorbency 6 times its weight
- Made with USA grown cotton

### **Recycled Delicate Task Wipers**

Ideal for light cleaning tasks in the laboratory, repair and maintenance facilities, and more. Quickly and easily wipes up liquid and dust. Packaged in a portable dispenser that reduces lint and cross contamination.

2342-300 280 count, 4.4" x 8.3" (11cm x 21cm),

pop-up box, 60 boxes/case

2343-140 140 count, 15" x 16.6" (38cm x 42cm),

pop-up box, 140 boxes/case



- Low linting
- Eco-friendly replacement for Kimwipes (KC34155, KC34256)
- 100% recycled wipe & box
- Biodegradable & sustainable

#### TechClean Absorbwipe™





Very soft and absorbent hydroentangled polyester wipe for cleaning optical equipment, fiber optics, and other sensitive surfaces.

2351-100 100 - 4"x4" (10cm x 10cm) flat wipes, double-bagged 2352-100 100 - 9"x9" (23cm x 23cm) flat wipes, double-bagged



- Non-abrasive
- Extremely soft
- Highly absorbent

### **TechClean Maintenance Wipes**

Hydroentangled cellulose/polyester wipe with high absorbency. Economical, but very high quality wipes are ideal for production and maintenance applications.

2359-300 300 - 9"x9" (23cm x 23cm) flat wipes

**Economy Grade** 

50 - 12"x 12" (30.5cm x 30.5cm) dry wipes 2364-50 2365-300 300 - 9" x 9" (23cm x 23cm) dry wipes



- High absorbency
- Economical





# Anti-Static Wipe (10)



Polyester wipe that is interwoven with DuPont's NEGA-STAT carbon yarn. NEGA-STAT dissipates static charge, preventing static buildup and allowing dissipation. Perfect for dry wiping ESD-sensitive components and boards. Tear resistant to allow cleaning around through-hole leads without fraying.

2362-150 150 - 9"x9" (23cm x 23cm) flat wipes

- Anti-static will not generate charge
- Class 10 cleanroom laundered & qualified
- Tear resistant

#### **TechClean Twill Wipe**

#### Tear Resistant Cotton

100% cotton twill weave designed for wiping abrasive surfaces. Tear resistant to allow cleaning around leads without fraying. Low static generation, so good for static sensitive areas.

2357-100 100 - 6"x6" (15cm x 15cm) flat wipes, double-bagged

- Tightly woven 100% cotton
- Tear resistant
- Low static generation

#### **TechClean SMT Wipe**



Lint-Free Foam

Polyurethane foam wipe designed for cleaning surface mount stencils and screening equipment. Fiber-free foam does not generate lint, which can clog fine pitched stencils and cause misprints.

2358-50 50 - 9"x9" (23cm x 23cm) flat wipes, double-bagged

- Class 100 cleanroom qualified
- Fiber-free construction no linting
- Will not snag on stencils
- Tear resistant

#### **Microfiber Glass & Plastic Cleaning Wipes**

Cleans and polishes glass or plastic. Ideal for removing fingerprints and light oils without the use of solvent cleaners.

2363-50 50 - 8" x 8" (20cm x 20cm) dry wipes

w/hemmed edges, double-bagged



- Low-linting
- Washable (avoid fabric softener)

#### **LCD & Plasma Screen Cleaning Wipes**

Soft and low-linting microfiber terry cloth is ideal for cleaning and polishing LCD and plasma screens, plexi-glass, chrome, and other sensitive surfaces. Buffs surface to a shine with or without cleaner.

**2368-2** 2 - 16"x 16" (40.6cm x 40.6cm) dry wipes w/hemmed edges



- Cleans & polishes sensitive surfaces
- Perfect for chrome polishing
- Effective wet or dry
- Washable (avoid fabric softener)
- Low-linting

# **Roll Wipes for DEK and MPM SMT Printers**

Made from low lint fabric and designed for vacuum operation.

- Maximum absorbency
- Strong both wet & dry
- Textured non-woven poly-cellulose fabric
- Low linting prevents misprints
- Density 68 GSM





Part#	OEM Brand	Equip model	Core ID	Notch	Paper Width	Core Width	Matl Length
2366-DEK	DEK	DEK 265, #129051/GS, GSX & 288	0.75" (19mm)	1	20.3" (515mm)	20.9" (530mm)	39' (11.9 M)
2367-MPM	MPM	MPM #1485/AP & UP2000	0.75" (19mm)	0	17.5" (444mm)	18" (457mm)	39' (11.9 M)





# **TechSwabs**

Precisely designed, manufactured and packaged to serve a wide variety of cleaning and maintenance needs. TechSwabs are manufactured in accordance with Techspray's rigid specifications, using specialized materials to ensure low particle generation.

#### **Cotton TechSwabs**

Tightly wrapped, pre-cleaned cotton ensures the least amount of extractable contaminants. The most economical choice for high volume usage.

All	swahs	shown	actual	size -	1:1	scale
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	Tip	Attachment	Handle	Handle	30	100	1000
Product	Width	of Tip	Length	Material	Pack Bag	Pack Bag	Pack Bag
2300	0.1875" (4.8mm)	Wrapped	6" (15cm)	Wood	-	2300-100	2300-1000
2301	0.1875" (4.8mm)	Wrapped	6" (15cm)	Wood	_	2301-100	2301-1000
2313	0.125" (3.2mm)	Wrapped	3 .25" (8.3cm)	Paper	2313-30	_	

#### **Foam TechSwabs**

All foam swabs are manufactured with 100 pores per inch reticulated polyurethane foam, which ensures excellent absorbency while minimizing contamination. Tips are affixed by heat seal to prevent tip loss, even while saturated with solvent. Flexible tips provide versatility and softer touch, while rigid heads allow for more aggressive cleaning.

	Tip	Attachment	Handle	Handle	50	1000
Product	Width	ofTip	Length	Material	Pack Bag	Pack Bag
2302	0.44"	Heat Sealed	6"	Polypropylene	2302-50	2302-100
	(11.2mm)		(15cm)			
	Cotton Bud Wrapped in Fo	oam, Rigid Head				
2303	0.19"	Heat Sealed	6"	Polypropylene	2303-50	2303-100
	(4.8mm)		(15cm)			
Rigid Head						
2306	0.5"	Heat Sealed	5"	Polypropylene	2306-50	2306-100
	(13mm)		(13cm)			
Rigid Head						
2307	0.19"	Heat Sealed	4"	Polypropylene	2307-50	2307-100
	(4.8mm)		(10cm)			
Flexible Tip						
2309	0.125"	Heat Sealed	3"	Polypropylene	_	2309-100
	(3.2mm)		(7.6cm)			
Flexible Tip	-					
2311	0.125"	Heat Sealed	2.625"	Polypropylene	_	2311-100
	(3.2mm)		(6.7cm)			



# Fiber Optic TechSwabs



#### All swabs shown actual size - 1:1 scale

Ideal for removing transmission disrupting contaminants in bulkhead connectors. The head conforms to the various connector shapes, cleaning the conductor bulkhead corners inside the bulkhead pocket. Tips are heat bonded, so no contaminating adhesives have been used.

	Tip	Attachment	Handle	Handle	50	1000
Product	Width	of Tip	Length	Material	Pack Bag	Pack Bag
2316	0.05" (1.25mm)	Heat Sealed	6.25" (16cm)	Polypropylene	2316-50	2316-1000
Flexible Tip						
2317	0.1" (2.5mm)	Heat Sealed	6.25" (16cm)	Polypropylene	2317-50	2317-1000
Flexible Tip	BROWNING STREET	MANAGEMENT STREET, STR	SECULIAR SECURISION SEC	SCALE WARMAN AND ASSESSED.	NAME OF STREET	THE RESERVE OF THE PARTY OF THE

# **Brushes**

Techspray's TechClean® brushes are made of premium grade materials. Don't be fooled by cheap imports. Bristles are securely stapled in place, eliminating loose bristles.

#### Choose the Right Bristle Material for Your Needs:

**Natural** — Soft, resilient and long lasting. Hog bristles are stiffer than

**Metal** — For burnishing, polishing, non-sparking static dissipation and deburring. Brass is a softer bristle than stainless steel.



#### Selecting the right brush:

Brushes dimensions are specified as bristle length (L), width (W), and trim (T).

#### **General Cleaning Brushes**

A wide variety of sizes and bristle material for general maintenance cleaning. All handles are made of strong, static neutral wood.

FRONT VIEW	SIDE VIEW Product	L Bristle Length	W Bristle Width	T Bristle Trim	Bristle Material	Handle Material	Handle Length
	2020-1	1.375" (35mm)	0.25" (6.4mm)	0.44" (11mm)	Horse Hair	Wood	7.75" (19.7cm)
	2021-1	1.375" (35mm)	0.25" (6.4mm)	0.44" (11mm)	Hog Bristle	Wood	7.75" (19.7cm)
	2022	2.125" (54mm)	0.875" (22mm)	0.75" (19mm)	Hog Bristle	Wood	8.375" (21.3cm)
	2025-1	1.375" (35mm)	0.25" (6.4mm)	0.44" (11mm)	Brass .003" (0.08mm)	Wood	7.75" (19.7cm)
	2027-1	0.875" (22mm)	0.375" (9.5mm)	0.5" (12.7mm)	Hog Bristle	Wood	4.94" (12.5cm)





#### **Static Sensitive Brushes**

Ideal for cleaning static sensitive electronics or components. Anodized aluminum falls withing the static dissipative range. Steel bristles are conductive, and horse hair is conductive when saturated with solvent.

FRONT VIEW	SIDE VIEW	Product	L Bristle Length	W Bristle Width	T Bristle Trim	Bristle Material	Handle Material	Handle Length
		2040-1	1.19" (30.2mm)	0.125" (3.2mm)	0.44" (11.2mm)	Horse Hair	Anodized Aluminum	6.44" (16.4cm)
MA		2042-1	1.19" (30.2mm)	0.375" (9.5mm)	0.44" (11.2mm)	Horse Hair	Anodized Aluminum	6.44" (16.4cm)
		2043-1	1.19" (30.2mm)	0.375" (9.5mm)	0.44" (11.2mm)	Stainless Steel .003" (0.08mm)	Anodized Aluminum	6.44" (16.4cm)

#### **Technical Brushes**

Small, precision brushes for technical cleaning and coating or adhesive application. Double-sided brushes include tapered end for tight areas.

FRONT VIEW	SIDE VIEW	Product	L Bristle Length	W Bristle Width	T Bristle Trim	Bristle Material	Handle Material	Handle Length
•		2030-1	0.125" (3.2mm)	0.0625" (1.6mm)	0.125" (3.2mm)	Goat Hair	Stainless Steel	3.5" (8.9cm)
	Top View Referent #2031  A Side View B	2031-1	0.25" (6.4mm)	0.19" (4.8mm)	<b>A</b> - 0.25" (6.4mm) <b>B</b> - 0.5" (13mm)	Horse Hair	Stainless Steel	4.5" (11.4cm)
	JICEVIEW							
	Top View  A Side View B	2032-1	0.5" (13mm)	0.375" (9.5mm)	<b>A</b> - 0.19" (4.8mm) <b>B</b> - 0.25" (6.4mm)	Horse Hair	Zinc Plated Steel	4.5" (11.4cm)
	INDEPRAY \$2032	2022.4	0.44//	0.275#	0.75#		7. 0	4.5%
		2033-1	0.44" (11.2mm)	0.375" (9.5mm)	0.75" (19mm)	Horse Hair	Zinc Plated Steel	4.5" (11.4cm)

### LOOK INSIDE FOR EXCITING NEW PRODUCTS...



#### **Aviation Degreasers**

- Meet Boeing & Airbus specifications
- NESHAP qualified
- Do not contain nPB & other highly toxic solvents





# Fine-L-Kote<sup>™</sup> LED Conformal Coating

- Coat over LEDs without diffusing or changing color of the light
- Eliminate time & materials masking around LEDs

Page 19





# **Index by Part Number**

Page 7

Flore	Part# Page #	Part# Page #	Part# Page #	Part# Page #	Part# Page #	Part# Page #
	1610-100FL 3	1652-105 7, 12	1802-500F 24	1831-10F 24	2120-5G 19	2352-100 27
	1610-100R 3	1652-G 7, 12	1803-500F 24	1832-5F 24	2120-P 19	2355-100 27
Part# Page #	1610-12S 3, 8	1654-54G 13	1804-500F 24	1833-10F 24	2120-G 19	2357-100 28
1505-G 9	1610-50PK 3	1654-5G 13	1808-100F 24	1977-DP 25	2204-8SQ 21	2358-50 28
1505-QT 9	1610-54G 3	1654-G 13	1808-10F 24	1978-1 25	2204-G 21	2359-300 27
1520-54G 14	1610-5G 3	1655-54G 13	1808-5F 24	1978-DP 25	2205-8SQ 21	2362-150 28
1520-5G14	1610-G1 3	1655-5G 13	1809-10F 24	2020-1 30	2205-G 21	2363-50 28
1520-G 14	1610-G4 3	1655-G 13	1809-25F 24	2021-1 30	2206-G 21	2364-5027
1530-54G 14	1610-P 3	1656-54G 13	1809-5F 24	2022-1 30	2211-54G 22	2365-300 27
1530-5G 14	1610-PT 3	1656-5G13	1810-100F 24	2025-1 30	2211-5G 22	2366-DEK 28
1530-G 14	1611-P 8	1656-G 13	1810-10F 24	2027-1 30	2211-8SQ 22	2367-MPM 28
1550-54G 14	1612-2SQ 9	1671-10S 2	1810-25F 24	2030-1 31	2211-G 22	2368-2 28
1550-5G14	1613-6S9	1671-155 2	1810-5F 24	2031-1 31	2222-8SQ 22	2505-N 25
1550-G 14	1620-10S 8	1672-10S 23	1811-100F 24	2032-1 31	2222-G 22	2506-N 25
1555-P 14	1621-10S 12	1672-155 23	1811-10F 24	2033-1 31	2300-100 29	2507-N100 25
1570-100DSP 15	1621-10SB 12	1673-105 2	1811-25F 24	2040-1 31	2300-1000 29	2507-N 25
1570-G 15	1621-54G 8, 12	1679-PT 12	1811-5F 24	2042-1 31	2301-100 29	2509-GN 25
1570-GX10 15	1621-5G 8, 12	1680-54G 13	1812-5F 24	2043-1 31	2301-1000 29	2510-N20, 25
1570-QT15	1621-G 8, 12	1680-5G 13	1813-5F 24	2102-12S 18	2302-1000 29	2510-P 20, 25
1571-15RTU-5G . 15	1622-10S 8	1680-G 13	1820-10F 24	2102-5G18	2302-50 29	2851-20S 7
1571-54G 15	1622-13S 8	1681-54G 13	1820-50F 24	2102-G 18	2303-1000 29	3400-205 5, 13
1571-5G15	1625-1859	1681-5G 13	1820-5F24	2102-GHV 18	2303-5029	3400-54G 5, 13
1571-G 15	1630-16S 6	1681-G 13	1821-10F 24	2102-P 18	2306-1000 29	3400-5G 5, 13
1572-54G 15	1631-16S 11	1697-10S 2	1821-25F 24	2104-12S 20	2306-50 29	3400-G 5, 13
1572-5G15	1631-16SB 11	1697-85 2	1821-50F 24	2104-5G 20	2307-1000 29	3401-54G 11, 13
1572-G 15	1631-5S 11	1702-8FP 17	1821-5F 24	2104-G 20	2307-50 29	3401-5G11, 13
1573-5G16	1632-16S 6	1702-G 17	1822-100F 24	2105-G 20	2309-1000 29	3401-G11, 13
1573-G 16	1634-12S 11	1720-5G 17	1822-10F 24	2106-12S 18	2311-1000 29	3500-11S 9
1573-QT 16	1635-20S 6	1720-G 17	1822-50F 24	2106-G 18	2313-3029	3505-11S 9
1583-10S 23	1638-54G 6, 11	1726-QT 17	1822-5F 24	2108-12S 20	2316-1000 30	3510-12S 9
1586-54G 13	1638-5G 6, 11	1733-G 17	1823-100F 24	2108-5G20	2316-5030	3601-16SQ 16
1586-5G 13	1638-G 6, 11	1733-QT 17	1823-10F 24	2108-G 20	2317-1000 30	3601-G 16
1586-G 13	1647-16S 7	1743-50PK 17	1823-25F 24	2108-P 20	2317-5030	53-4001-0533 22
1608-100DSP 3	1649-12S 12	1743-QT 17	1823-5F 24	2109-5G 20	2340-100 27	53-4003-0533 22
1608-100FL 3	1651-16S 6, 12	1747-10S 23	1824-25F 24	2109-G 20	2342-300 27	53-4004-0533 22
1608-100R 3	1651-54G 6, 12	1756-8517	1824-5F 24	2109-P 20	2343-140 27	CAN1671-10S 2
1608-G4 3	1651-5G 6, 12	1756-G 17	1825-5F 24	2110-P 20	2350-100 27	CAN1671-15S 2
1610-100DSP 3	1651-G 6, 12	1802-100F 24	1830-10F 24	2110-G 20	2351-100 27	CAN1672-10S 23

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